

Functional Hierarchy of Roles for the Sole Power Mobile App

This document outlines the functional hierarchy of roles within the Sole Power mobile app, as defined by the RFP. It provides a detailed breakdown of the functionalities associated with each role, including technical aspects like login, signup, logout, dashboard, and more.

1. Participant Role

- **1.1 Account Management**

- **1.1.1 Signup:**

- Allow users to create an account using email and password.
 - Option to link existing Sole Power website account.
 - Collect basic user information (name, location, preferred language).
 - Option to join a team or participate individually.

- **1.1.2 Login:**

- Secure login using email and password.
 - Option for password recovery.
 - Remember me functionality.

- **1.1.3 Profile Management:**

- Update profile information (name, location, preferred language, team affiliation).
 - Change password.
 - Manage email notifications.

- **1.1.4 Logout:**

- Secure logout functionality.

- **1.2 Trip Tracking and Logging**

- **1.2.1 Trip Tracking:**

- GPS-enabled trip tracking functionality.
 - Start/stop trip functionality.
 - Automatic trip detection (based on movement and location).
 - Option to manually enter trip details (date, time, distance, mode of transport).
 - Trip type selection (work, errand, social, other).
 - Mode of transport selection (walk, bike, run, e-bike, skate, other).
 - Option to add notes or descriptions to trips.

- **1.2.2 Trip Log:**

- Display a list of logged trips with details (date, time, distance, mode, type).
 - Ability to edit or delete logged trips.
 - Filter trips by date, type, mode, or other criteria.
 - Export trip data (CSV, PDF, etc.).

- **1.3 Dashboard and Analytics**

- **1.3.1 Personal Dashboard:**

- Display cumulative data for the current season (Memorial Day - Columbus Day).
 - Show total trips, mileage, gas saved, CO2e reduced, money saved.
 - Option to view data for the calendar year and lifetime of the account.
 - Visualizations (graphs, charts) to represent data.

- **1.3.2 Leaderboards:**

- Access individual and team leaderboards for the current season.
 - View historical leaderboards from previous years.
 - Filter leaderboards by team, date range, or other criteria.
 - Display participant rankings based on various metrics (mileage, trips, CO2e reduced).

- **1.4 Incentives and Rewards**

- **1.4.1 Incentive Program:**

- Display information about available incentives and rewards.
 - Track participant progress towards earning incentives.
 - Option to redeem earned rewards.

- **1.5 Social Features**

- **1.5.1 Team Communication:**

- Ability to communicate with other team members within the app.
 - Share trip updates and progress.
 - Participate in team challenges.

- **1.5.2 Social Sharing:**

- Option to share trip data and achievements on social media platforms.

- **1.6 Information and Resources**

- **1.6.1 Sole Power Program Information:**

- Access information about the Sole Power program, its goals, and benefits.
 - View program rules and guidelines.

- **1.6.2 Transportation Resources:**

- Access maps and information about bike lanes, walking paths, and public transit routes.
- Link to external transportation resources (bike sharing programs, transit schedules).

2. Administrator Role

- **2.1 User Management**
 - **2.1.1 Account Management:**
 - Create, edit, and delete user accounts.
 - Assign roles and permissions to users.
 - Reset user passwords.
 - Manage user email addresses.
 - **2.1.2 Team Management:**
 - Approve or deny team creation requests.
 - Add or remove participants from teams.
 - Change participant team affiliations.
- **2.2 Trip Management**
 - **2.2.1 Trip Editing:**
 - Edit or delete logged trips for participants.
 - Correct errors in trip data.
 - **2.2.2 Trip Data Export:**
 - Export user trip data for analysis and reporting.
- **2.3 Dashboard and Analytics**
 - **2.3.1 Administrative Dashboard:**
 - View real-time program data and analytics.
 - Monitor user activity and engagement.
 - Track program progress and performance.
 - **2.3.2 Data Visualization:**
 - Generate reports and visualizations based on program data.
 - Analyze user behavior and trends.
- **2.4 Incentive Management**
 - **2.4.1 Incentive Program Management:**
 - Create, edit, and manage incentive programs.
 - Set reward criteria and redemption rules.
 - Track incentive program participation and redemption.
- **2.5 Communication and Notifications**
 - **2.5.1 Email Newsletter:**
 - Manage and send email newsletters to users.
 - Create and schedule email campaigns.
 - **2.5.2 Push Notifications:**
 - Send push notifications to users for program updates, reminders, and announcements.
- **2.6 System Administration**
 - **2.6.1 Data Backup and Recovery:**
 - Implement data backup and recovery procedures.
 - Ensure data security and integrity.
 - **2.6.2 System Monitoring:**
 - Monitor app performance and stability.
 - Identify and resolve technical issues.
 - **2.6.3 App Updates:**
 - Manage app updates and releases.
 - Implement new features and bug fixes.

3. Technical Considerations

- **3.1 Platform Compatibility:**
 - The app should be compatible with both iOS and Android platforms.
 - Consider cross-platform development frameworks for efficiency.
- **3.2 User Interface (UI) and User Experience (UX):**
 - The app should have a user-friendly and intuitive UI/UX.
 - Design should align with the Sole Power branding and messaging.
- **3.3 Data Security and Privacy:**
 - Implement robust security measures to protect user data.
 - Comply with relevant data privacy regulations (GDPR, CCPA).
- **3.4 Performance and Scalability:**
 - The app should perform well on various devices and network conditions.
 - Design the app to handle a large number of users and data.
- **3.5 Integration with Existing Systems:**

- Integrate the app with the existing Sole Power website and database.
- Ensure seamless data transfer and synchronization.
- **3.6 Testing and Quality Assurance:**
 - Conduct thorough testing to ensure app functionality, stability, and security.
 - Implement a comprehensive quality assurance process.

This functional hierarchy provides a detailed framework for the development of the Sole Power mobile app. It outlines the key functionalities and technical considerations for each role, ensuring a comprehensive and user-friendly experience for participants and administrators.